TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. ITL.1105US

In Re Application Of: **Tom E. Pearson, et al.**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/814,528	March 31, 2004	Vanessa Mary Girardi	21906	2833	6903

Invention: **Infrared Transmissive Integrated Circuit Socket Cap**

COMMISSIONER FOR PATENTS:

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March 26, 2007

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Dated: **May 17, 2007**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant: Tom E. Pearson, et al.	§	Art Unit:	2833
Serial No.: 10/814,528	§	Examiner:	Vanessa Mary Girardi
Filed: March 31, 2004	§	Atty Docket:	ITL.1105US (P18745)
For: Infrared Transmissive Integrated Circuit Socket Cap	§	Assignee:	Intel Corporation

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APPEAL BRIEF

Date of Deposit: May 17, 2007
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Nancy Meshkoff

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REAL PARTY IN INTEREST

The real party in interest is the assignee Intel Corporation.

RELATED APPEALS AND INTERFERENCES

None.

STATUS OF CLAIMS

Claims 1-25 (Rejected).

Claims 1-25 are rejected and are the subject of this Appeal Brief.

STATUS OF AMENDMENTS

All amendments have been entered.

SUMMARY OF CLAIMED SUBJECT MATTER

In the following discussion, the independent claims are read on one of many possible embodiments without limiting the claims:

1. An integrated circuit socket comprising:

a socket housing (Figure 1, 28; specification at page 4, lines 2-7);

a hinged cover secured to said housing (Figure 1, 14; specification at page 4, lines 2-7); and

an infrared transmissive cap (Figure 1, 24; specification at page 4, lines 18-27) removably secured to said cover.

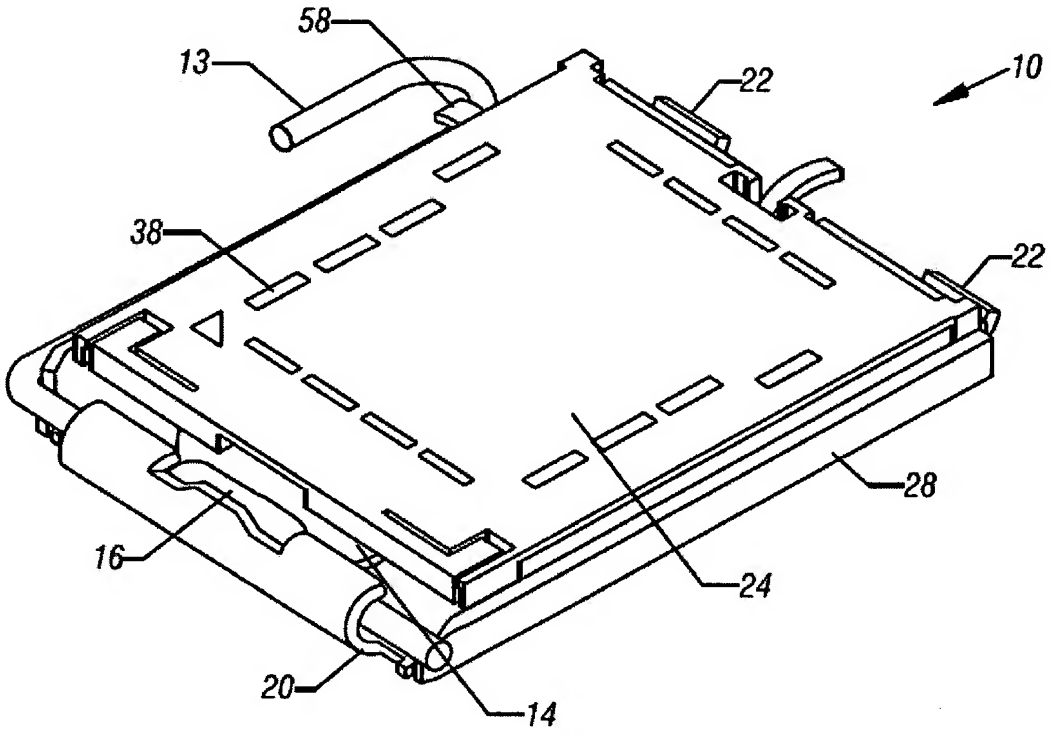

FIG. 1

11. A cap for an integrated circuit socket comprising:

a body (Figure 2, 24) having apertures (Figure 2, 38) therethrough, said body formed of a material that is infrared transmissive (specification at page 4, lines 18-27); and

tabs (Figure 2, 32) coupled to said body to removeably secure said body to an integrated circuit socket (specification at page 6, lines 5-14).

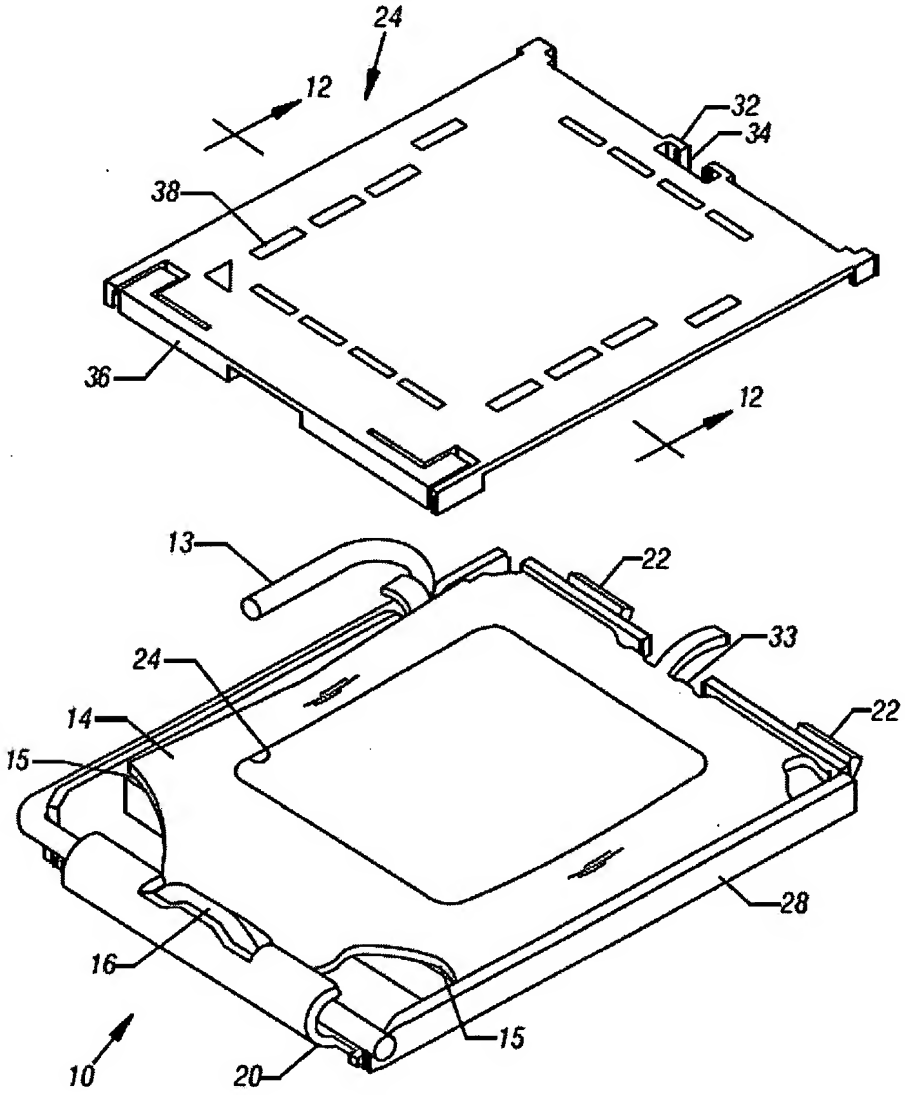

FIG. 2

21. A method comprising:

securing an infrared transmissive cap (Figure 2, 24) to an integrated circuit socket (Figure 2, 10; specification at page 4, lines 2-7);

exposing said cap and said socket to infrared energy (Figure 9; specification at page 5, line 11 to page 6, line 4); and

surface mounting said socket to a printed circuit board (Figure 9, 50; specification at page 7, lines 17-26).

At this point, no issue has been raised that would suggest that the words in the claims have any meaning other than their ordinary meanings. Nothing in this section should be taken as an indication that any claim term has a meaning other than its ordinary meaning.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. **Whether claims 1-5, 8-14, 17-21, 23, and 25 are unpatentable under 35 U.S.C. § 103(a) over Liao (US 6,887,990) in view of Ciambrone (US 5,626,280).**

B. **Whether claim 22 is unpatentable under 35 U.S.C. § 103(a) over Liao (US 6,887,990) and Ciambrone (US 5,626,280) and further in view of Edwin (US 5,262,594).**

C. **Whether claims 6, 7, 15, 16, and 24 are unpatentable under 35 U.S.C. § 103(a) over Liao (US 6,887,990) and Ciambrone (US 5,626,280) in view of Yu (US 6,626,691).**

ARGUMENT

A. Are claims 1-5, 8-14, 17-21, 23, and 25 unpatentable under 35 U.S.C. § 103(a) over Liao (US 6,887,990) in view of Ciambrone (US 5,626,280)?

Claim 1 calls for an infrared transmissive cap removably secured to a hinged cover on a socket housing. The cap may protect the socket part of the integrated circuit insulation while facilitating surface mounting of the socket to the printed circuit board. Infrared radiation from the surface mount oven passes through the cap to heat the socket (rather than the cap) so that the socket is thereby soldered to the printed circuit board.

The cited reference to Liao, if anything, teaches away. It simply relates to a cap for a socket. The problem with Liao is that the cap becomes heated in the usual course. Thus, if anything, Liao teaches away from the claimed invention and presents an example of the problem solved by the present application.

The cited reference to Ciambrone has nothing to do with an integrated circuit socket. It is a soldering tool, not a socket. The fact that infrared transmissive elements have been used in the past is not sufficient to show that it would be obvious to use an infrared transmissive cap in place of the cap used by Liao. Certainly, this was not obvious to Liao.

The suggestion that the reason to substitute the infrared soldering tool of Ciambrone for the non-infrared transmissive cap of Liao is that the cap may be recycled, reformed, and reused is noted, but makes no sense. Liao would respond that this rational provided him no reason to go to the trouble to use an infrared transmissive cap because his current cap can be recycled, reformed, and reused. In short, nothing in either Liao or Ciambrone teaches any reason to use infrared transmissive material for the cap of Liao. Suggestions to the contrary rely on nothing but hindsight reasoning.

For all these reasons, the cited references provide no guidance to one skilled in the art, such as Liao, as to why Liao's solution could be improved. There is not even a recognition that the cover of Liao would heat up in the course of reflow. Not only do the references fail to teach the solution claimed here, but they do not even recognize the problem that gives rise to the claimed solution.

For all these reasons, the rejection of claim 1 should be reversed.

Claim 11 also calls for an infrared transmissive cap for an integrated circuit socket. For

the same reasons this rejection should be reversed.

Claim 21 calls for securing an infrared transmissive cap to an integrated circuit socket and exposing the cap and the socket to infrared energy. Neither cited reference nor their combination teaches exposing both of the cap and the socket to infrared energy. The final rejection concedes that this is not done in Liao. *See* page 5 of the Office action. It is suggested that Ciambrone teaches a cap material that is transparent to infrared radiation. But Ciambrone has nothing to do with a socket. Exposing both the cap and the socket to infrared radiation is nowhere suggested in either reference or their combination. Likewise mounting that socket to a printed circuit board is nowhere suggested in either reference or their combination. Moreover, like the other claims, claim 21 calls for using an infrared transmissive cap secured to an integrated circuit socket. Thus for at least the reasons described above, the rejection of claim 21 should also be reversed.

B. Is claim 22 unpatentable under 35 U.S.C. § 103(a) over Liao (US 6,887,990) and Ciambrone (US 5,626,280) and further in view of Edwin (US 5,262,594)?

For the reasons set forth above, reversal is requested.

C. Are claims 6, 7, 15, 16, and 24 unpatentable under 35 U.S.C. § 103(a) over Liao (US 6,887,990) and Ciambrone (US 5,626,280) in view of Yu (US 6,626,691)?

For the reasons set forth above, reversal is requested.

* * *

Applicant respectfully requests that each of the final rejections be reversed and that the claims subject to this Appeal be allowed to issue.

Respectfully submitted,

Date: May 17, 2007

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CLAIMS APPENDIX

The claims on appeal are:

1. An integrated circuit socket comprising:
a socket housing;
a hinged cover secured to said housing; and
an infrared transmissive cap removably secured to said cover.

2. The socket of claim 1 wherein said cap includes a plurality of openings formed through the cap to allow the passage of heated air.

3. The socket of claim 1 including spring catches on opposed ends of said cap to removeably secure said cap to said cover.

4. The socket of claim 1 wherein said cap transmits at least 80 percent of incident infrared radiation.

5. The socket of claim 4 wherein said cap transmits at least 95 percent of incident infrared radiation.

6. The socket of claim 1 wherein said cap is formed of plastic.

7. The socket of claim 6 wherein said cap is formed of translucent red plastic.

8. The socket of claim 1 wherein said cap includes standoffs to space said cap from said cover.

9. The socket of claim 1 wherein said cap has a curved lower surface.

10. The socket of claim 1 wherein said cap includes at least two apertures and downwardly extending prongs extending away from said apertures to reflect incident radiation passing through said apertures.

11. A cap for an integrated circuit socket comprising:

a body having apertures therethrough, said body formed of a material that is infrared transmissive; and

tabs coupled to said body to removeably secure said body to an integrated circuit socket.

12. The cap of claim 11 wherein said tabs include spring catches on opposed ends of said cap to removeably secure said cap to said socket.

13. The cap of claim 11 wherein said cap transmits at least 80 percent of incident infrared radiation.

14. The cap of claim 13 wherein said cap transmits at least 95 percent of incident infrared radiation.

15. The cap of claim 11 wherein said cap is formed of plastic.

16. The cap of claim 15 wherein said cap is formed of translucent red plastic.

17. The cap of claim 11 wherein said cap includes standoffs to space said cap from said socket.

18. The cap of claim 11 wherein said cap has a curved side.

19. The cap of claim 11 wherein said apertures include downwardly extending prongs to reflect infrared radiation passing through said apertures.

20. The cap of claim 11 wherein said cap includes guides to guide said cap into alignment with said socket.

21. A method comprising:

securing an infrared transmissive cap to an integrated circuit socket;

exposing said cap and said socket to infrared energy; and

surface mounting said socket to a printed circuit board.

22. The method of claim 21 including exposing said cap and said socket to a surface mount reflow oven producing both infrared and convective heating.

23. The method of claim 21 including allowing heated air to circulate through said cap via apertures through said cap.

24. The method of claim 21 including providing an apertured, red plastic, infrared transmissive cap on said socket.

25. The method of claim 21 including enabling at least 80 percent of the infrared incident energy to pass through said cap to said socket.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.